REMARKS

The above-referenced application has been reviewed in light of the Examiner's Office Action dated September 14, 2006. The undersigned thanks the Examiner for courteously conducting the telephonic interview of December 13, 2006. By the present amendment, Claims 1, 7-8, 12-13, 17, 20, 22,24, 27 and 29-33 have been amended; and new Claims 36-41 have been added. Accordingly, Claims 1-41 are currently pending in this application. The Examiner's reconsideration of the rejections is respectfully requested, particularly in view of the above amendments and the following remarks.

In accordance with the Office Action, Claims 8, 13, 22, 27, 30 and 32 are indicated as comprising allowable subject matter. These claims were also indicated as comprising allowable subject matter in the claim set as originally filed. The Examiner's indication of allowable subject matter is gratefully acknowledged. Accordingly, Claims 8, 13, 22, 27, 30 and 32 have been rewritten in independent form including all of the limitations of the originally filed base claims.

In accordance with the Office Action, Claims 1-6, 29, 31 and 33-34 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 6,738,675 to Dai in view of U.S. Patent No. 6,131,166 to Wong-Insley. Claims 1, 29 and 31 have been amended.

Amended Claims 1, 29 and 31 each recite, *inter alia,* "wherein the at least one hardware module comprises at least one microprocessor on the SOC and at least one peripheral device on the SOC, and the working context with respect to the at least one

hardware module comprises state values for a same state from each of the at least one microprocessor and the at least one peripheral device." Support for these amendments may be found in the specification as originally filed (*see, e.g.*, page 4, lines 15-17; page 8, lines 10-20). No new matter has been added. Thus, the working context as currently claimed is a hardware-level working context including same state microprocessor and peripheral state information that is specific to the given hardware, here a System-On-a-Chip ("SOC").

The '675 to Dai may show saving a hardware working context from a processor core to volatile memory, but fails to contemplate saving a hardware working context for more than one hardware module such as Applicant's "state values for a same state from each of the at least one microprocessor and the at least one peripheral device", and further fails to contemplate saving the hardware working context to non-volatile memory.

The Examiner has taken official notice that an SOC design is a well-known integration of separate functional units. Such notice is acknowledged, but it is deemed insufficient to reach or render obvious Applicant's same state working context of at least one microprocessor and at least one peripheral device. That is, it was not well known to save a working context including same state information for a microprocessor and hardware units prior to Applicant's invention, such as Applicant's "state values for a same state from each of the at least one microprocessor and the at least one peripheral device" as recited in amended Claim 1. When taken in the context of the Examiner's notice, Dai still fails to contemplate, much less teach or suggest Applicant's qualified same state working context for both a microprocessor and an on-chip peripheral.

The Examiner relies on the '166 to Wong-Insley to support saving the so-called working context to non-volatile memory. Wong-Insley is generally directed towards a cross-platform application-level working context, which should be construed as only application-level data since hardware module state values would not be usable for cross-platform migration, which is Wong-Insley's stated purpose (*see, e.g.,* Wong-Insley at Title and Abstract). The Examiner points to column 11, lines 34-38 to support the saving of "hardware states" in "non-volatile" storage. It is respectfully submitted that the "hardware states" of Wong-Insley necessarily refer to external hardware devices, such as a printer's status, for example, rather than to Applicant's SOC or even Dai's chip-level microprocessor. *See, e.g.,* Wong-Insley at column 11, lines 19-24. Thus, the "hardware states" of Wong-Insley are inapposite to Applicant's "at least one microprocessor on the SOC and at least one peripheral device on the SOC, and the working context with respect to the at least one hardware module comprises state values for a same state from each of the at least one microprocessor and the at least one peripheral device" as set forth in Applicant's amended Claims 1, 29 and 31.

In accordance with the Office Action, Claims 7, 9-12, 14-21, 23-26, 28 and 35 stand rejected under 35 USC § 103(a) as being unpatentable over the '675 to Dai in view of the '166 to Wong-Insley, and further in view of U.S. Patent No. 6,363,501 to Tobias et al. Claims 7, 12, 17, 20 and 24 have been amended.

As discussed above with respect to amended Claim 1, each of amended Claims 7, 12, 17, 20 and 24 recites, *inter alia,* "wherein the at least one hardware module comprises at least one microprocessor on the SOC and at least one peripheral device

on the SOC, and the working context with respect to the at least one hardware module comprises state values for a same state from each of the at least one microprocessor and the at least one peripheral device." No new matter has been added.

The '501 to Tobias et al. is generally directed to a microcontroller having internal peripheral devices and a scan path to save states of the internal peripheral devices. As understood in the art, a microcontroller generally differs from a microprocessor in that the microcontroller does not use an operating system ("OS"), does not have as much on-chip memory, and does not have as many processor resources. Thus, the microcontroller of Tobias et al. is inapposite to the OS-based approach of Wong-Insley and to the microprocessor-based approach of Dai. Any combination of the non-OS approach of Tobias et al. with the OS-based approach of Wong-Insley would be unworkable. In addition, any conceivable combination of Tobias et al. with Dai would fail to address at least a variable-sized working context suitable for a microprocessor, which may use variable stack sizes and indirect pointers to various chip-level resources outside of the contemplated realm of a simple microcontroller, for example. In any event, the '501 to Tobias et al. fails to cure at least the above-discussed deficiency of Dai in view of Wong-Insley with respect to saving "hardware states" in "non-volatile" memory.

New Claims 36-41 have been added. New Claims 36-41 depend from allowable base claims and each additionally recite a System-On-a-Chip ("SOC"). No new matter has been added.

Conclusion

Accordingly, it is respectfully submitted that amended or re-written independent Claims 1, 7, 8, 12, 13, 17, 20, 22, 24, 27, 29, 30, 31 and 32 are in condition for allowance for at least the reasons stated above. Since the remaining dependent Claims each depend from one of the above claims and necessarily include each of the elements and limitations thereof, it is respectfully submitted that these claims are also in condition for allowance for at least the reasons stated, and for reciting additional patentable subject matter. Thus, each of Claims 1-41 is in condition for allowance. All issues raised by the Examiner having been addressed, reconsideration of the rejections and an early and favorable allowance of this case is earnestly solicited.

Respectfully submitted,

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